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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,099	09/09/2003	Michiaki Sakamoto	Q77411	9849

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EXAMINER	
WANG, GEORGE Y	

ART UNIT	PAPER NUMBER
2871	

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/657,099	SAKAMOTO ET AL.	
	Examiner	Art Unit	
	George Y. Wang	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *1,2 and 8-16* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 September 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 3-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sawayama et al. (U.S. Patent No. 6,184,960, hereafter "Sawayama") in view of Shimada et al. (U.S. Patent No. 5,949,507, hereafter "Shimada").

3. As to claim 3, Sawayama discloses a method of fabricating an LCD device, comprising the step of forming a photosensitive organic material (fig. 7b, ref. 24) on or over a transparent substrate, the photosensitive organic material being divided into a display section and a terminal section located outside the display section (fig. 29a), the display section including a reflection region and a contact-hole area (fig. 22, ref. 96), and the photosensitive organic material having a first thickness in the reflection region a second thickness different from the first thickness in the contact-hole area, and third thickness different from the first and second thicknesses in the terminal section (fig. 22, ref. 24; ref. 29a). Furthermore, the references teaches exposing the photosensitive organic material layer to exposing light in such a way that the photosensitive organic material layer in the reflection region is exposed at a first exposure value (fig. 7c, ref. 26) according to the first thickness, the photosensitive organic material layer in the contact-hole area is exposed at a second exposure value according to the second thickness (fig. 7g, ref. 26), and developing the photosensitive organic material layer exposed, thereby forming a first substrate (fig. 22, ref. 98), forming a second substrate (fig. 22, ref. 101), and coupling the first substrate and the second substrate with each other in such a way as to sandwich a liquid-crystal layer (fig. 22, ref. 105) in between.

However, the reference fails to specifically disclose the photosensitive organic material in the terminal section is exposed to a third exposure value according to the third thickness.

Shimada discloses a method of making an LCD where the photosensitive organic material (fig. 4c, ref. 42) has a first thickness in the reflection region, a second thickness different from the first thickness in the contact-hole area, and a third thickness different from the first and second thickness in the terminal section, where the photosensitive organic material layer in the terminal section is exposed at a third exposure value according to the third thickness (fig. 4c, ref. 42a).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the photosensitive organic material in the terminal section is exposed to a third exposure value according to the third thickness since one would be motivated to provide a display device having excellent production efficiency and excellent continuity of the contact hole for high quality image characteristic (col. 8, lines 1-8).

4. As to claims 4-6, Sawayama discloses the method of fabricating an LCD as recited above, where the step of exposing the photosensitive organic material layer, the contact-hole area and the terminal section are exposed to the light in one shot at the second exposure value (fig. 7c, ref. 26), and the terminal section is exposed to light in separate shots (fig. 7g, ref. 26) using different masks (fig. 6a, 6b).

5. As to claim 7, Sawayama discloses the method of fabricating an LCD as recited above, where the step of exposing the photosensitive organic material layer, the reflection region, the contact-hol area, and the terminal section are respective exposed to the light using different masks (fig. 6a, 6b), and where each of the masks has a three –layer structure (col. 15, lines 37-67).

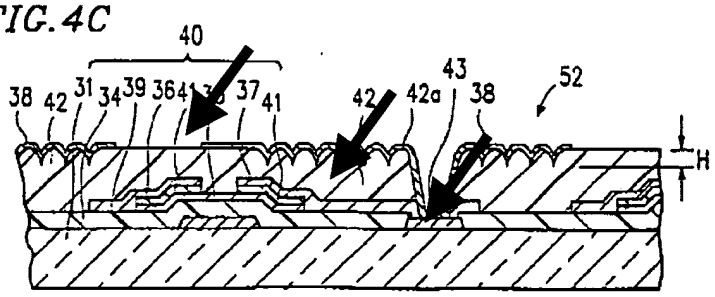
Response to Arguments

6. Applicant's arguments filed October 14, 2005 have been fully considered but they are not persuasive.

Applicant's main argument is that none of the prior art references, namely Sawayama and Shimada, discloses the photosensitive organic material layer having a first thickness in the reflection region, a second thickness different from the first thickness in the contact-hole area, and a third thickness different from the first and second thickness in the terminal section, where the photosensitive organic material layer in the terminal section is exposed at a third exposure value according to the third thickness. However, it is noted that the Sawayama reference clearly teaches a method of fabricating an LCD device, comprising the step of forming a photosensitive organic material (fig. 7b, ref. 24) on or over a transparent substrate where the photosensitive organic material has a first thickness in the reflection region a second thickness different from the first thickness in the contact-hole area, and third thickness different from the first and second thicknesses in the terminal section (fig. 22, ref. 24; ref. 29a). Furthermore, Shimada discloses a method of making an LCD where the photosensitive

organic material in the terminal section is exposed to a third exposure value according to the third thickness (fig. 4c, ref. 42a). While Applicant argues that the reference do not teach or suggest different thickness and different exposure values corresponding to the different thickness in the Remarks, it is noted even if Sawayama does not disclose the various thicknesses, particularly in the terminal region, the limitation is clearly taught in Shimada (fig. 4c, ref. 42; see arrows designating the various thicknesses in the figure reproduced below for convenience).

FIG. 4C



And although Applicant argues that the exposure value is not taught to be different for each of the various thicknesses, it is noted that the Sawayama reference teaches that that the greater the exposure, the more varied the thickness (as depicted in Fig. 7).

As a result, Applicant's arguments do not place the application in condition for allowance at this time.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 571-272-2304. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

George Y. Wang
Examiner
Art Unit 2871

December 20, 2005

ANDREW SCHECHTER
PRIMARY EXAMINER